

We claim:

1. A process for the continuous preparation of polyether alcohols by reaction of alkylene oxides with H-functional starter substances in the presence of DMC catalysts, which comprises, at the beginning of the process
  - a) firstly placing initial charge material and DMC catalyst in a reactor,
  - b) metering in alkylene oxide so that the metering rate which is maintained for continuous operation of the reactor is reached in a time of from 100 to 3 000 seconds,
  - c) metering in starter substance during or after step b) so that the metering rate which is maintained for continuous operation of the reactor is reached in a time of from 5 to 500 seconds,
  - d) after the fill level in the reactor which is desired for continuous operation of the reactor has been reached, taking product off continuously from the reactor while at the same time metering in starter substance and alkylene oxides in such an amount that the fill level in the reactor remains constant and metering in DMC catalyst so that the catalyst concentration necessary for continuous operation of the reactor is maintained in the reactor.
- 20 2. A process as claimed in claim 1, wherein inert solvents or H-functional compounds are used as initial charge material.
3. A process as claimed in claim 1, wherein monofunctional or polyfunctional alcohols are used as initial charge material.
- 25 4. A process as claimed in claim 1, wherein polyfunctional reaction products of alcohols with alkylene oxides having a molecular weight of greater than 300 g/mol are used as initial charge material.
- 30 5. A process as claimed in claim 1, wherein the polyether alcohol which is the end product of the process is used as initial charge material.
6. A process as claimed in claim 1, wherein monofunctional or polyfunctional alcohols having a molecular weight of from 62 to 400 g/mol are used as starter substance.
- 35 7. A process as claimed in claim 1, wherein propylene oxide, butylene oxide, ethylene oxide or a mixture of at least two of the alkylene oxides mentioned is used as alkylene oxide.
- 40 8. A process as claimed in claim 1, wherein propylene oxide or a mixture of propylene oxide and ethylene oxide is used as alkylene oxide.

9. A process as claimed in claim 1, wherein the low molecular weight starter is heated to from 50 to 130°C before being metered into the reactor.
- 5 10. A process as claimed in claim 1, wherein the reactor is filled to a fill level of from 20 to 80% in step a).
11. A process as claimed in claim 1, wherein the concentration of the DMC catalyst at the beginning of the reaction is in the range from 50 to 500 ppm.